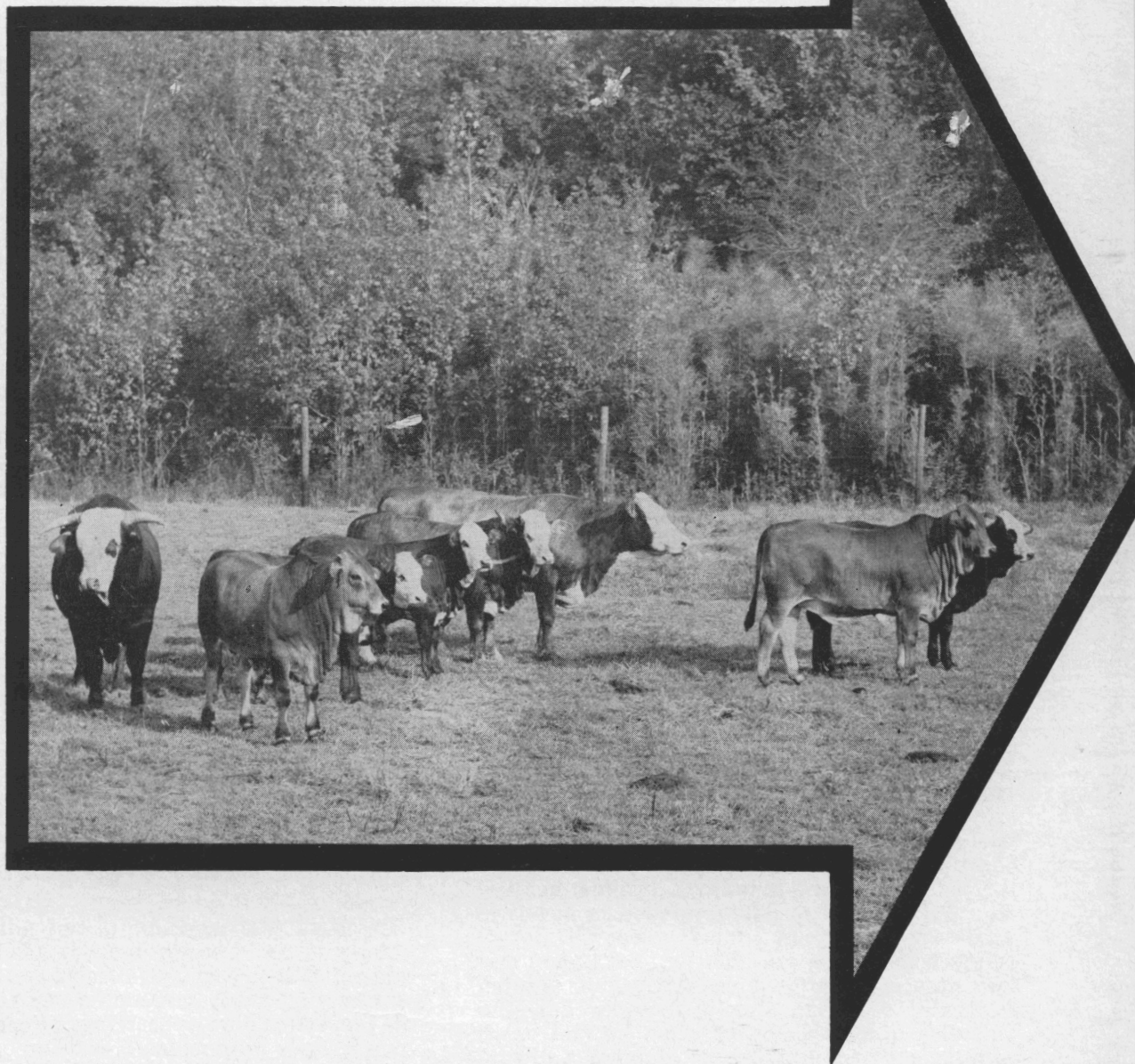


Slaughter Calf Production

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ACKNOWLEDGEMENT

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Slaughter Calf Production

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Texas A. & M. College System

THE SOUTHERN homemaker wants small, good quality steaks for her family. She likes to see more steaks per pound so that each member may have an individual steak, thus assuring a uniform serving and eliminating the task of cutting a large steak into smaller pieces. The homemaker would like to buy steaks having about an eighth inch of outside fat which covers a bright, light red lean. Tenderness is important in evaluating a cut of meat. Although cooking plays an important part in serving a delicious steak, age and grade affect tenderness even more. Youth is indicative of tenderness. Therefore, the younger animals have become more popular in the South. Price also has been an influence since this grade of meat does not go through feedlot expense.

Southern cattlemen are marketing younger cattle. More cattle have found their place on the small diversified farms which are adapted to early marketing. Cattle on these small farms generally are not of feeder quality and they give greatest returns at weaning time. In the feeder and stocker cattle areas of Texas stockmen normally do not sell slaughter calves, but this practice might be profitable at certain times.

Texas slaughter calves usually weigh 300 to 500 pounds. Slaughter-calf production implies producing milk-grass-fat calves at weaning. Fat calves of mixed breeding and lacking in feeder quality usually sell to good advantage on the early markets. Their quality and weight are separating factors at this time. Heavy, fat calves, regardless of quality, usually sell for slaughter. The intermediate weights, as well as the heavier, long-aged calves lacking flesh but of good quality, sell as stockers or feeders. Light, thin, low quality calves are a market problem.

Many management practices are involved in handling cattle. First among these is pasture. Good grazing for as many months as possible tends to make the enterprise more profitable. The breed and selection of cattle calls for special interest and a constant check on performance. Breeding practices to suit individual situations also must be considered in view of market prices. Proper management of herd bulls directly affects the calf crop percentage, and handling of the herd at calving time needs special attention. Dehorning, castrating, brand-

ing, disease prevention and control of internal and external parasites require proper attention. Supplemental feeding to supply essential nutrients at all times requires advance planning. Marketing is an important part of the business and should be studied by the producer.

Pasture - Forage Program

A good pasture-forage program is essential to the success of raising cattle. Improved pastures, native range and supplemental crops for grazing may fit into most operations. The use of cropland in pasture-crop rotation systems is practical in certain areas. The use of commercial fertilizers alone may pay dividends even on "so called" permanent or native pastures. Soil tests are recommended with the use of fertilizers. Proper management of improved grasses and legumes is necessary for maximum grazing. This management may consist of fertilizing, mowing and deferred or rotation grazing. Under such systems cropland should supplement permanent pastures. Allowance should be made for feed reserves for winter and dry periods with any system. Crops such as Sudan and Johnsongrass, oats, wheat, barley, alfalfa and lespedeza are used for grazing, as well as for hay. Recommended crops and farming practices should be used in each area to supply year-round grazing. Hay and silage are cheap forms of insurance in this business.

Selection

Choosing a breed of cattle to produce slaughter calves is a matter of personal preference. All kinds of cattle are used for slaughter calf production. Selecting cattle to produce the heaviest calves at weaning means that emphasis must be placed on rate of gain and milking ability. Weaning weight of the calf is the most reliable guide to the milking ability of the cow. Weight for age as yearlings, two and three-year-olds are good indicators of gaining ability. Since the ability to gain rapidly and to produce milk are both inherited, these factors must be considered in selecting breeding animals to produce heavy slaughter calves.

The most effective tool for selecting and improving a breeding herd is a set of records

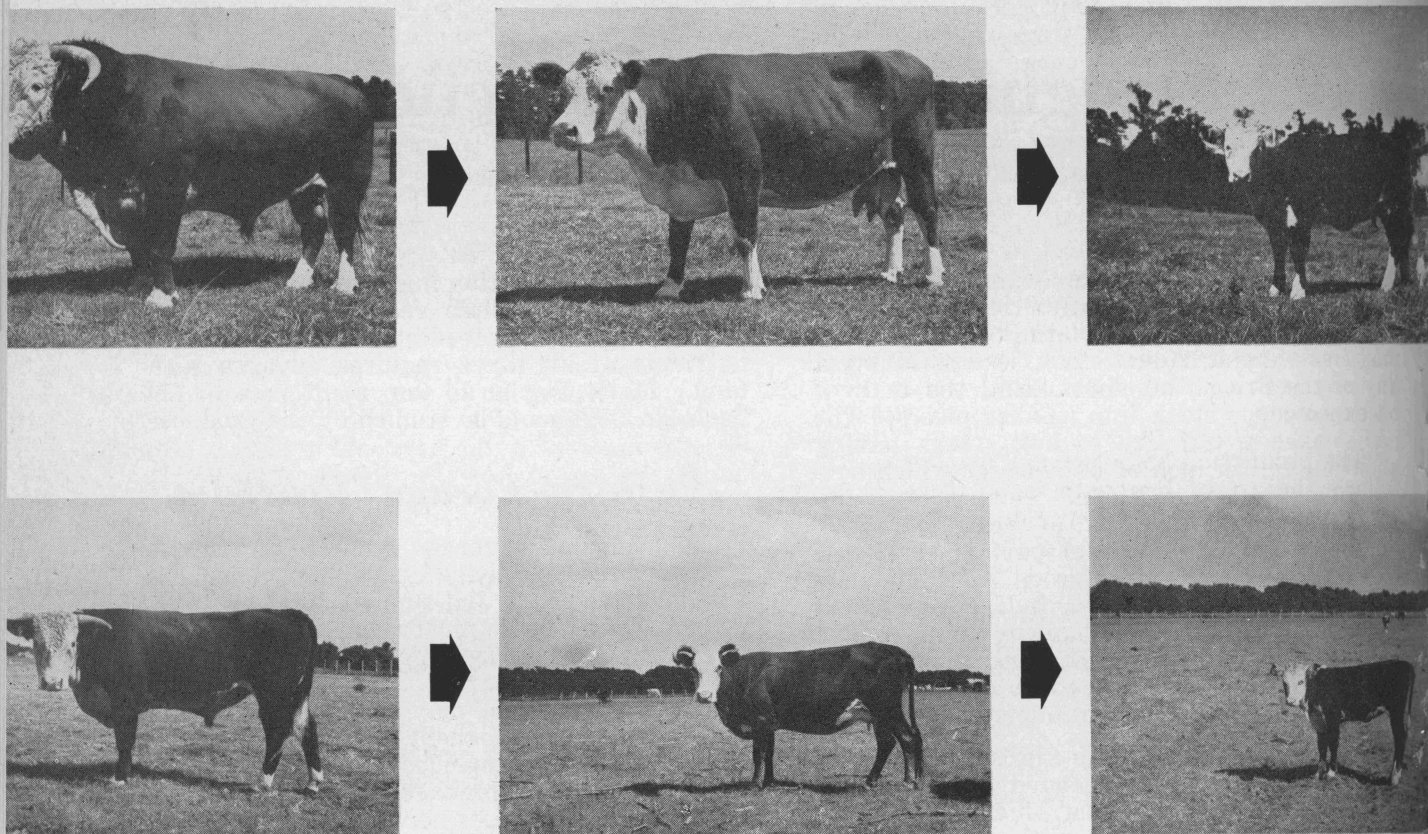


Figure 1. Quality in sire and dam is passed on to the calf.

of production on every cow in the herd. To be profitable, a breeding herd of beef cattle must have (1) high reproductive efficiency, evidenced by regularity and a high percentage of calving, (2) good milking and mothering ability, evidenced by heavy weaning weights and high percentage of calves weaned and (3) the ability to grow and fatten rapidly on pasture and feed after weaning. Vast differences exist among cattle in these respects and these characteristics are inherited.

Purebred Herds

Breeders having purebred herds must strive constantly to increase the efficiency and quality of their cattle. Previously mentioned selection factors are a "must" for purebred herds. These cattle are filling the demand for herd replacements.

Crossbred Herds

Cattlemen east of a line from Laredo to Paris, Texas, have used Brahman cattle extensively for crossbreeding to produce hardy, fast-growing calves better adapted to hot weather. The offspring from mating animals of different breeds is referred to as a crossbred, but the term, "crossbred," is used frequently to describe a plain inferior individual. This results from haphazard, hit-or-miss crossing of non-descript animals, a practice which offers little. The higher the quality of the sire and dam, the higher the quality of the offspring. This is illustrated in Figure 1.

At the Lufkin Experiment Station the mating of a good quality Hereford bull to a good quality half-Brahman half-Hereford cow consistently produced the heaviest calves at wean-

Summary of Lufkin Experiment Station calf crops (1944-1953)

Breeding of	Sire	Hereford	Brahman	Hereford	Hereford
	Dam	Hereford	Hereford	(1/2 Brahman 1/2 Hereford)	(1/4 Brahman 3/4 Hereford)
Ave. weaning weight of calves Breed		401 Hereford	430 1/2B 1/2H	520 3/4H 1/4B	463 7/8H 1/8B

ing time, or 7 to 8 months of age. The 9-year average weights for this three-fourths Hereford one-fourth Brahman calf crop is 119 pounds more than the straight Hereford calves, and 57 pounds more than the seven-eighths Hereford one-eighth Brahman calves at weaning time. The three-fourths Hereford one-fourth Brahman crossbred was considered the most profitable slaughter calf (Figure 2). Winter-dropped calves and excellent pasture management played an important role at this location. The weight difference between the Herefords and crossbreds has been reduced as the pastures were improved. Similar results from any of the British breeds of equal quality may be expected.

The production of larger and hardier cattle follows the use of Brahman blood in beef cattle herds of the southern region. Experimental results indicate that the Brahman blood should be in the dam.

Commercial cattlemen with cows of mixed breeding should consider grading up the herds by the use of good beef bulls of whatever breed

the cows show a predominance. Close culling should be done. After the herd is improved to good quality grade cows, a crossbreeding plan may be initiated. Establish a cow herd having half-British and half-Brahman breeding. The problem is to maintain this percentage cross in the herd. A crossbreeding plan to maintain an approximate half-British breed, half-Brahman breed cow herd is shown in Figure 3. These crossbred cows bred to good British breed bulls may be expected to produce the heaviest slaughter calf.

Another method is to cross good quality beef cows of British breeds with good quality Brahman bulls. The resulting half-Brahman females are kept in the herd and bred to a good quality bull of one of the British breeds. The offspring from this crossing produces the heaviest slaughter calf.

Another possibility with cows of British breeds is to use a half-British, half-Brahman bull to produce calves carrying three-fourths British, one-fourth Brahman breeding.

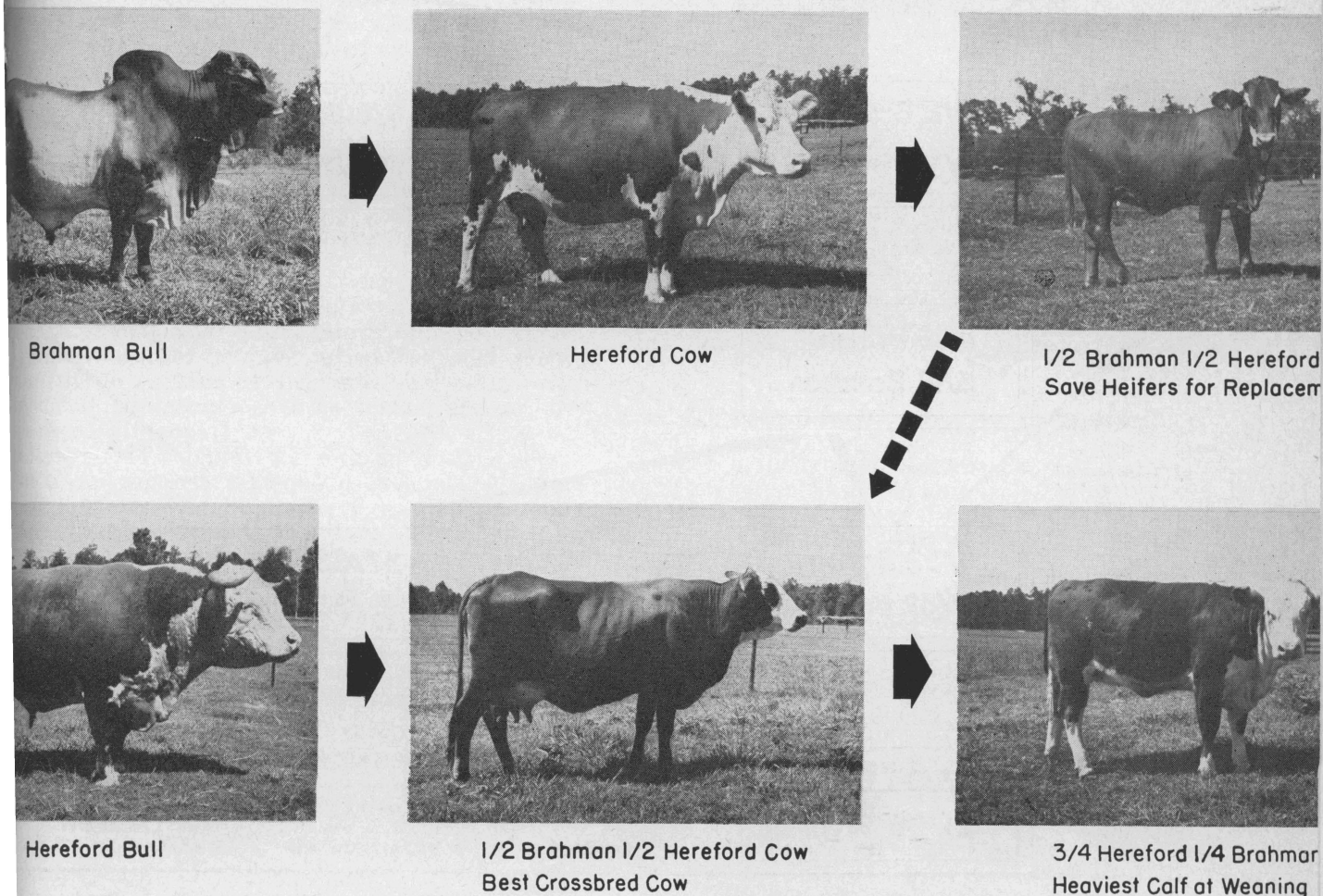


Figure 2. System of crossbreeding at Lufkin Experiment Station which produced heaviest calves at weaning (1944-1953).

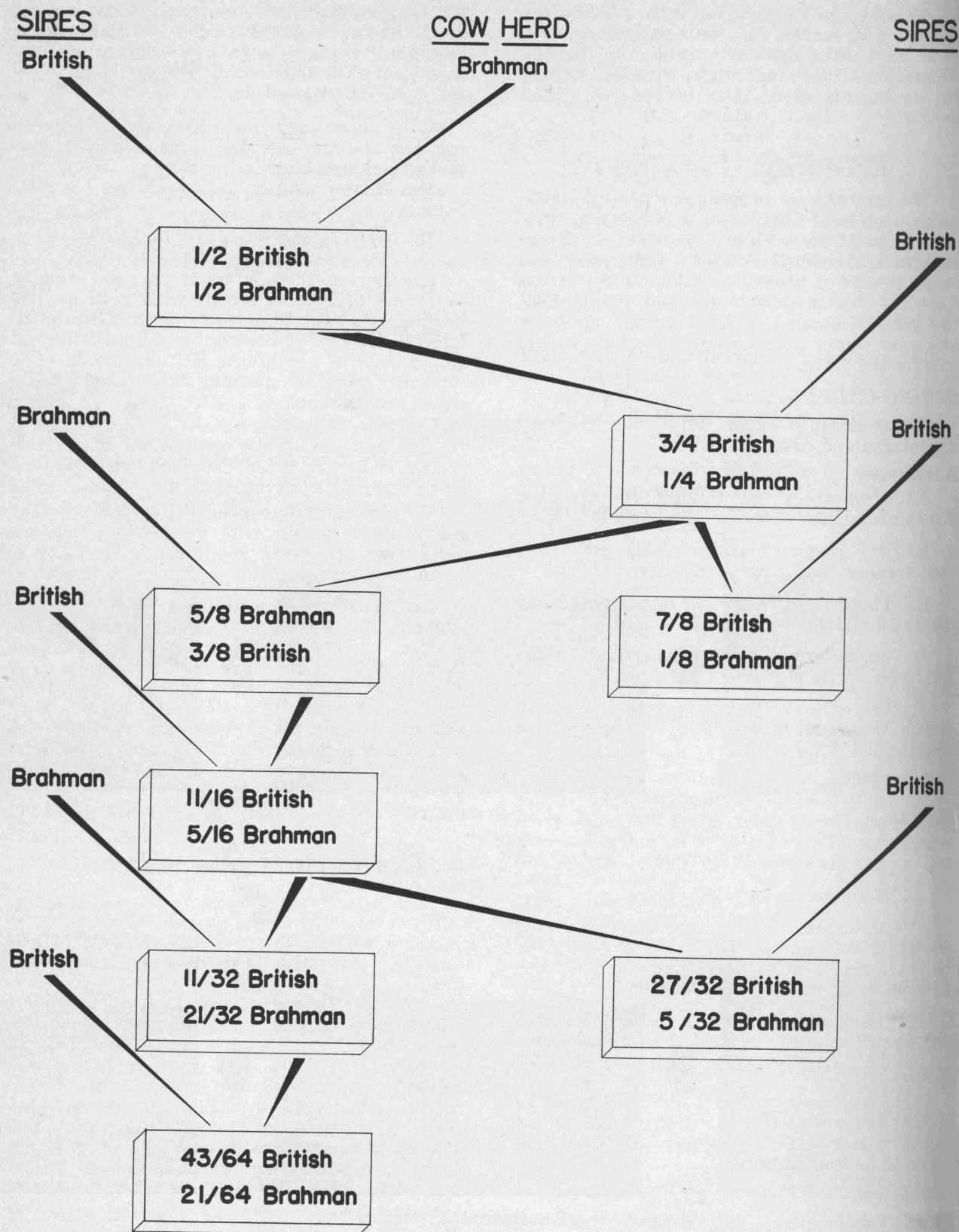


Figure 3. Crossbreeding plan to maintain an approximate one-half British, one-half Brahman cow herd.

Some producers may want to use the following: Whenever the cow herd appears to show more than one-half Brahman blood, introduce the British bull. If more than one-half British blood is showing, introduce a Brahman bull.

Breeding Practices

The time of year to have calves dropped depends upon local feed, labor and climate. Producers should have their cows drop calves as early as local conditions allow. Some producers follow controlled breeding seasons while others leave the bulls with the cow herd throughout the year. Opinions differ on both methods, and what works well in one case may not hold true for the other.

SPRING CALVING:

Spring dropped calves offer the following advantages and disadvantages:

Advantages

A. Cows are in good shape for breeding due to abundance of early spring feed.

B. Dry pregnant cows winter with less feed expense than cows with calves at side.

C. There is little trouble at calving time due to an abundance of feed.

D. Spring-dropped calves are ready for the fall feeder cattle market demand.

E. Calves may be held over to clean up stubble fields and other cheap roughages then sold the following spring.

Disadvantages

A. Milk flow is stimulated to the extent that calves cannot take all of the milk from some cows. This necessitates extra labor in milking the cows or risking spoiled udders.

B. Many calves develop scours.

C. At about the time the calves get old enough to consume all the milk, dry weather begins, and the milk flow decreases. Therefore, calves do not continue to develop rapidly.

D. There usually are more flies, lice, ticks and screwworms in the spring and summer.

FALL CALVING:

Some cattlemen prefer to time the breeding so that the cows will drop their calves in the fall or winter. This practice has its advantages and disadvantages.

Advantages

A. Calves escape hot weather, flies and screwworms while very young.

B. While producing less milk the cows are able to care for the calves on the limited sup-

ply because the calves are very young. When good grazing becomes available in the spring the calves are large enough to utilize fully the increased milk flow, thereby making excellent gains during this period.

C. Calves may be marketed before hot weather and may sell on a higher market than those marketed later in the season. Under this system calves usually are marketed by early June.

D. Fall calves usually are heavier than spring calves at weaning time.

E. Under some livestock-crop-farming systems more labor is available for cattle operations during the fall and winter months.

Disadvantages

A. It takes more feed to winter a cow with calf at side than it does a dry pregnant cow.

B. More severe weather is expected and additional care may be needed.

C. Two and 3-year-old heifers nursing fall calves must be wintered separately from the older cows and given good care if they are to wean good calves.

Regardless of the season when calves are dropped, it is advisable to keep the cow herd in a good thrifty condition, in order to have thrifty calves born. Livestock farmers need to plan their system of breeding so that farm labor is available when the cattle require most attention. Plan for supplemental summer, fall and winter grazing and have adequate home-grown feed reserves. Study markets to take advantage of seasonal top-market prices. Above all, produce a high quality fat calf.

Herd Bull Management

The management of bulls during breeding is often reflected in the number of calves dropped. A well-developed 3-year-old bull may be expected to settle 30 to 40 cows during the breeding season. When two or more bulls are used for 40 or more cows, a rotation system should be practiced. In some pastures, better results will be obtained by placing half the bulls in the pasture for a week or 10 days, and then replacing them with other bulls. Only breeding cows and bulls should be in the same pasture. The number of cows per bull depends on size of pasture, terrain, brush or open range, condition of bulls, age of bulls and individual bull personality. Under some range conditions no more than 10 cows per bull may be necessary. Extra feeding of bulls to keep them in good breeding condition pays dividends through the calf crop. Additional factors which affect calf crop percentages are nonbreeding cows,

disease, condition of range or overstocking and seasonal climatic conditions. An increase from 50 to 90 percent in the calf crop will reduce the cost per calf by 45 percent.

Calving Time

Cows should be allowed to calve on pasture and in most cases be left alone. Trap pastures with less hazards for springers may be used. If the calf is not born after two hours from beginning of labor, assistance may be needed. Only qualified help at this time is advisable. Heifers should be given about 4 to 6 hours from first labor. The normal position is for the front legs to show first, followed by the head between the legs. Another normal, but less frequent, position is hind feet first with calf's back up. If other positions exist, help may be needed. The navel cord may be painted with iodine at birth and broken approximately 4 inches from the body. During extremely cold, wet weather the calf should be dried and protected. The best protection is a stomach full of milk. If the calf has not nursed within 2 to 3 hours after birth, it should be helped to nurse or fed from a bottle.

Dehorning, Castrating and Branding

Dehorn, castrate and brand when calves are from 2 to 4 weeks of age to prevent weight loss. EQ 335 should be used as a smear to control screwworms. Commercial dehorning equipment on the market is satisfactory. The pocket knife is still the best instrument for castration. Other types of equipment require special skill and should not be used by those inexperienced. Disinfect all equipment before using it on another calf. Lysol or quaternary ammonium chloride are good disinfectants. Kerosene or ordinary rubbing alcohol are not considered effective disinfectants. Dusty lots are responsible sometimes for cases of tetanus. Calves should not be permitted to wallow on the ground during these operations.

Creep Feeding

Creep feeding beef calves may add as much as 100 pounds per head to the weaning weight. The feeds may be home-grown grains. Oats is one of the best with which to begin. Additional feeds may follow oats. A more detailed discussion is found in B-792, *Creep Feeding Beef Calves*, available from county agricultural agents' offices. Do not let creep feeding overshadow better breeding, feeding and other management problems. Under good grazing conditions resulting in high milk produc-

tion from cows, the calves do not consume a great deal of extra feeds.

Feeding Minerals and Vitamin A

Young animals require less feed per pound of gain than older ones. The gain is primarily due to growth. Therefore, the calves must be properly fed. They should receive daily the required amounts of protein, carbohydrates, fats, minerals, vitamins and water. Most of these are found in sufficient amounts in good grazing and milk.

Free access to granulated salt and steamed bonemeal is necessary at an early age to insure strong bone development. Other minerals are essential but they generally are available in supplemental feeds and good grazing. County agricultural agents have B-174, *Minerals for Beef Cattle*, which gives detailed information. Lack of vitamin A is of concern to cattlemen. This vitamin is especially important to the growing calf. Sometimes bulls fail to settle cows due to this deficiency. Cows that cannot conceive and give birth to a normal, healthy calf may be lacking in this vitamin. Fortunately the bull and the cow can store vitamin A in their liver and fat. The calf having little fat on the body and a very small liver is not able to store enough for reserve. Therefore, calves need to be given this vitamin almost daily. The best way to provide vitamin A is through green feed. Green grasses, legumes, weeds or any green plants that cattle eat supply vitamin A, provided enough is available. Dehydrated alfalfa meal or pellets and good, pea-green alfalfa hay are good substitutes when green grazing is unavailable. Details on vitamin A may be found in B-242, *Control of Vitamin A Deficiency in Feeding Beef Cattle*.

Equipment

Weight losses occur whenever cattle are worked. Bulldogging and roping should be used only as a last resort. Most cattlemen prefer holding pens, corrals and chutes to handle their cattle. Such equipment usually pays for itself in saving labor and weight losses. Loading chutes, squeezes, calf tables, power-spray equipment, troughs and hay racks reduce operating costs and should be standard equipment. Use of scales takes the guesswork out of cattle raising. The growing scarcity of experienced cowhands and horses makes good equipment a necessity.

Internal Parasites

Weights of calves and older cattle are affected by internal parasites. This problem var-

ies from year to year, depending on the weather. Wet falls, winters and springs are more likely to increase stomach worm infestation. If calves are thrifty and in good flesh there may be no need to treat for worms. If in doubt consult a veterinarian and follow his recommendation. Additional information is available from county agricultural agents in C-287, *Control of Stomach Worms and Liver Flukes in Cattle and Sheep*.

External Parasites

Flies, ticks, mites and lice reduce calf gains. Sucking insects take blood from the body which should be used to increase weight. A number of good insect control products are on the market and, when administered properly, give excellent results. A copy of C-324, *Guide for Controlling External Parasites of Livestock and Poultry*, can be obtained from local county agricultural agents.

Prevent and Control Disease

Weight loss is certain whenever a calf is sick. Preventive measures are always cheaper than controls or cures. Sanitation, isolation and vaccination are parts of this phase of management. Although slaughter calves are produced principally on pastures, some cleanup measures need attention.

Sanitation is the most important factor in the control of animal diseases. Muddy areas around earthen tanks, water troughs, windmills or creeks serve as excellent reservoirs for germs of coccidiosis, foot rot, infectious scours and many other causes of calf losses. Old pens and lots are good sources of disease. If areas of this type cannot be cleaned, drained or fenced off, diseases will take their toll in slaughter calf production.

Another common source of disease in young cattle is the addition of new animals to the herd without a period of isolation (about 30 days) to assure freedom from contagious disease. Most respiratory infections in calves follow contact with new animals.

Vaccination against blackleg should be done at the time of castrating, dehorning and branding. Calves kept after weaning should be re-vaccinated. Vaccination against other diseases such as malignant edema or anthrax may be necessary. However, routine vaccination against diseases that are not present locally is not beneficial. Consult a veterinarian or county agricultural agent as to other measures which may be needed.

Marketing

Markets are set up to make a place for any kind of calves. The prices for calves vary according to grades (Figure 5), demand and sup-

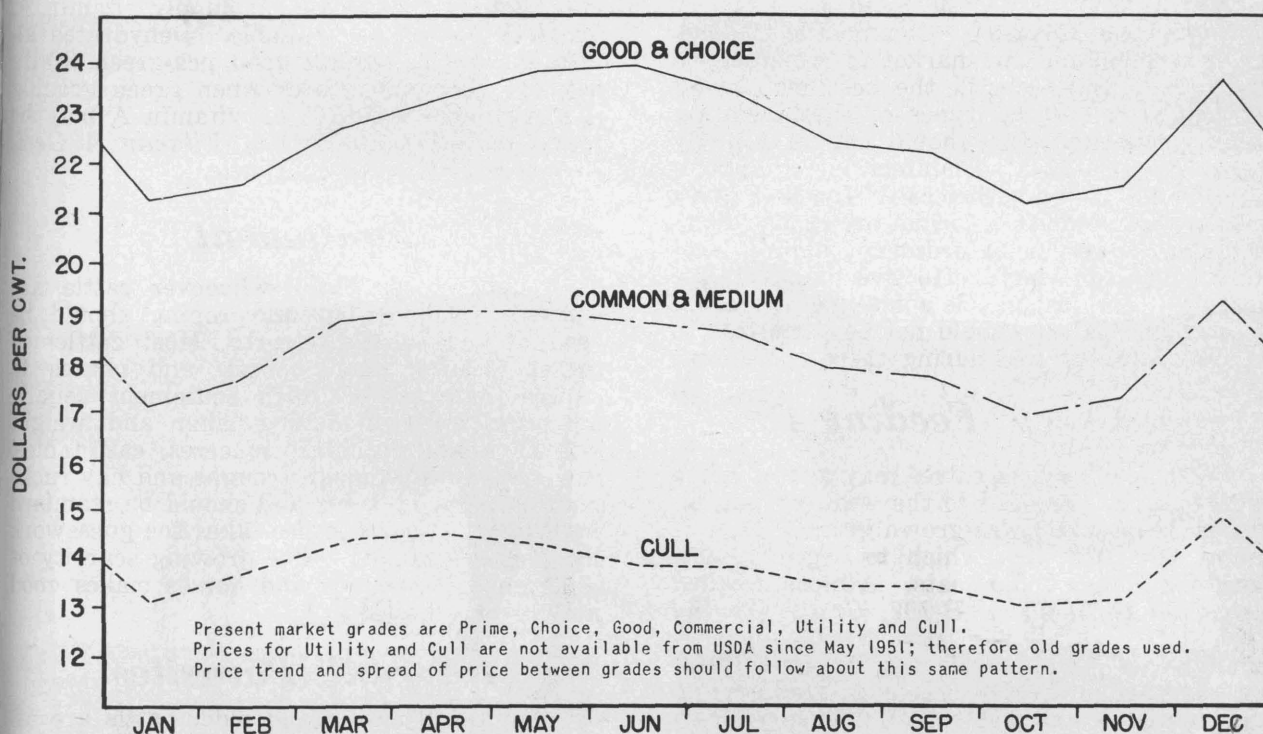


Figure 4. Average prices of slaughter calves by months 1946-1950.—Three terminal markets.

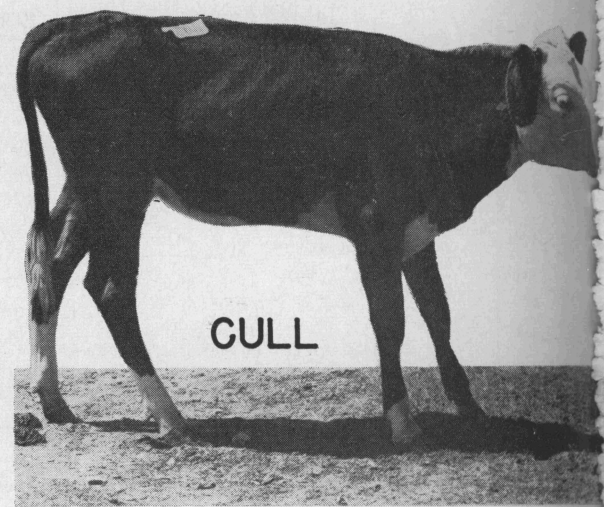
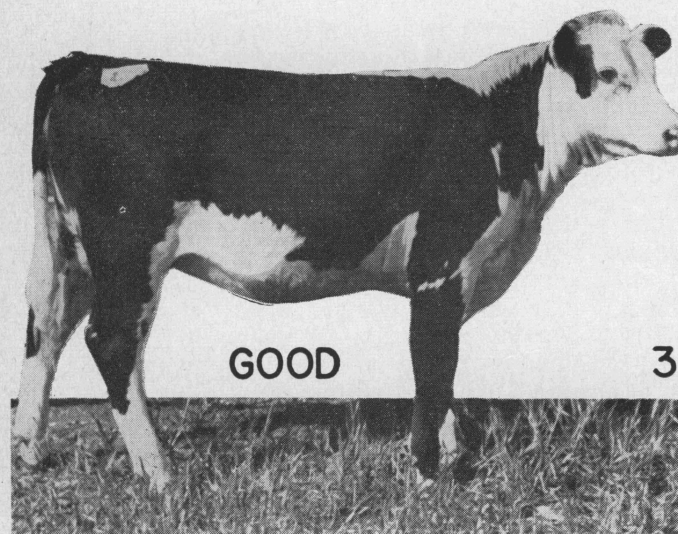
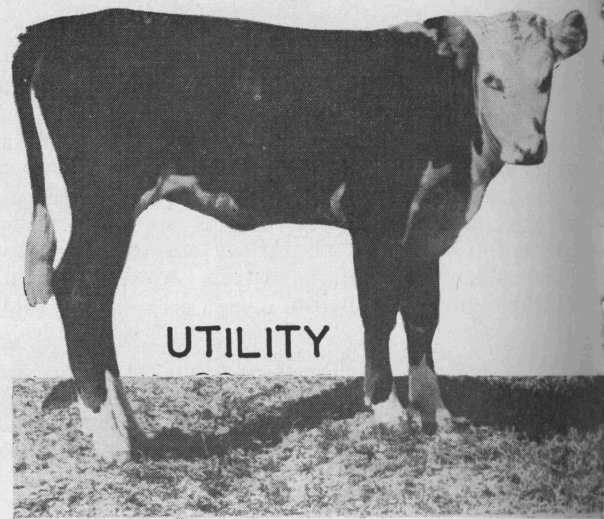
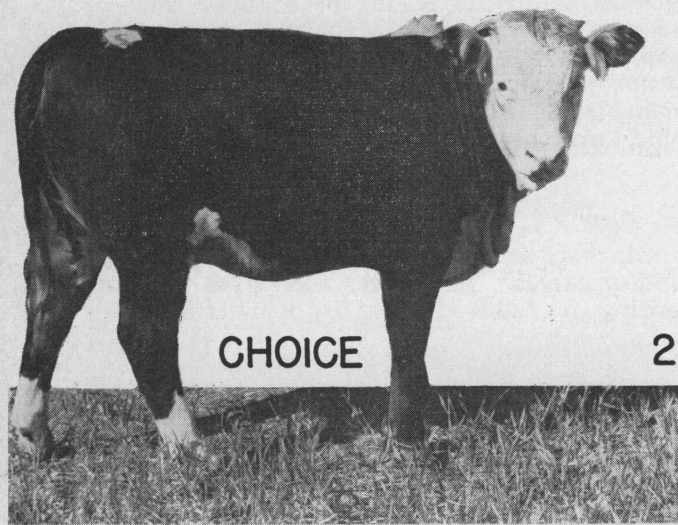
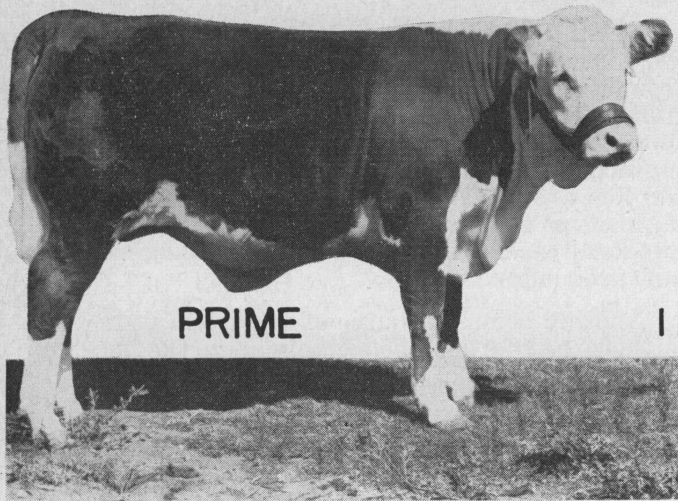


Figure 5. Slaughter Calf Grades.

ply. An oversupply of any group means lower prices. Therefore, the producer needs to plan ahead on his breeding and feeding schedule in order to market when his kind of cattle are in demand. Figure 4 gives the average prices by months and by grades for slaughter calves at three Texas terminal markets for the years 1946-50. Investigate local markets for the time of year and week day to market slaughter calves. Heavier calves and more of the better grades will be marketed under a well-planned and managed slaughter calf program.

The Manager

A genuine interest in cattle and an appreciation for good management has a great influence on the weight of a calf when it goes to market. Nervous cattle do not make the best gains. Nervousness may be inherited or it may result from rough handling. The best cattlemen usually are gentle mannered, easy-going and calm. Once cattle are mistreated it is difficult to get them gentled. The best cowhand or handler is not always a successful cattlemen, and a successful cattlemen may not always be a good cowhand or handler.

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7. Texas Agricultural Extension Service Bulletin No. C-324, *Guide for Controlling External Parasites of Livestock and Poultry*.

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